

Amendment and Response After Final Rejection
Applicants: Bruce S. Ellingboe et al.
Serial Number: 09/963,878

Attorney Docket: CV-0290US

REMARKS

Claims 1 - 12 are pending. By this amendment, Applicants propose to amend claims 1 and 4. The amendment to claim 1 adds the limitation of an oxygenator originally recited in claim 4. The amendment to claim 4 amends the recitation of the oxygenator consist with the amendment to claim 1. No new matter is introduced.

Rejection Under 35 U.S.C. § 102

Claims 1-3 and 9-12 are finally rejected under 35 U.S.C. 102(b) over U.S. Pat. No. 5,462,416 to Dennehey, et al. ("Dennehey"). Dennehey does not anticipate any of the rejected claims, including proposed amended claim 1. Dennehey has no structure that oxygenates venous blood and transfers oxygenated venous blood to the patient, as required by proposed amended claim 1. Applicants respectfully submit that, with the entry of the present amendment to claim 1, all of the presently rejected claims define an invention that patentably distinguishes from Dennehey. Accordingly, entry of the proposed amendment and allowance of all the presently rejected claims is solicited.

Rejections Under 35 U.S.C. 103

In response to the Examiner's query regarding the inventive entity of the pending claims, applicants state that the subject matter of the claims was commonly owned at the time the inventions claimed therein were made.

Claims 1-4 and 6-12 are finally rejected under 35 U.S.C. 103(a) as unpatentable over U.S. Pat. No. 5,385,540 to Abbott, et al. ("Abbott") in view of Dennehey. These references do not render obvious the presently rejected claims, including proposed amended claims 1 and 4. The discussion above regarding the

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teachings of Dennehey is repeated here as equally pertinent. There is no suggestion in Abbott or Dennehey or in any of the other art of record to combine the teachings of these two references in the manner the Examiner proposes. The Abbott system uses (col. 5, lines 26-29, *inter alia*) a bladder pump that “advantageously reduces the shearing forces and potential damage to which blood might be subjected in other pumps, such as peristaltic pumps.” Dennehey discusses the advantages of peristaltic pumps to centralize pumping, valving and sensing operations (col. 1, lines 36-38, col. 23, line 2 – col. 26, line 4, *inter alia*) and does not teach or suggest the use of any other pump. Accordingly, one of skill in this art, aware of the Abbott teaching against the use of peristaltic pumps and Dennehey’s preference for peristaltic pumps, would find no motivation to incorporate the Dennehey teachings into the Abbott disclosure or *vice versa*. Also, note the teachings of Plotkin, discussed further below, that also disfavor the use of bladder pumps. The Examiner points to no teaching or suggestion in any of the prior art of record that would supply for this divergence in teachings between Abbott and Dennehey, and the further negative teachings of Plotkin, discussed below in more detail. In addition, claims 2-4 and 6-12 add further patentable features that Abbott and Dennehey do not show or suggest. Withdrawal of this rejection is solicited.

Claim 5 is finally rejected under 35 U.S.C. 103(a) as unpatentable over Abbott in view of Dennehey, in view of U.S. Pat. No. 5,820,579 to Plotkin (“Plotkin”). These references do not render claim 5 obvious. Applicants repeat the discussions above regarding Dennehey and Abbott as equally pertinent. There is no suggestion in Abbott, Dennehey or Plotkin or in any other art of record to combine these reference teachings in the manner the Examiner proposes. Plotkin does not supply for the deficiencies of these two references. Indeed, Plotkin

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teaches away from the disclosure of Abbott. Abbott recommends the use of a bladder pump. Plotkin denigrates the use of bladder pumps (col. 1, lines 59-67, *inter alia*), because they tend to be more mechanically complex and do not lend themselves to low cost manufacture for one-time disposable use. Plotkin states that increased blood trauma is experienced in these pumps due to the multiple check valves in the flow path and stagnant areas due to less than perfect chamber filling and ejection. Note the multiple check valves 84, 86, 88, 90, 92, 94 in the Abbott disposable cassette (Fig. 2 and the discussion in the specification). Accordingly, one of skill in this art, aware of the Plotkin teachings against the use of bladder pumps, would find no motivation to incorporate the Plotkin teachings into the Abbott or Dennehey disclosures or *vice versa*. The Examiner points to no teaching or suggestion in any of the prior art of record that would supply for this divergence in teachings among Abbott, Dennehey and Plotkin. Applicants solicit withdrawal of this rejection.

References That Teach Away From Proposed Combination Do Not Support Obviousness

The Abbott, Dennehey and Plotkin references teach away from each other regarding the pumps used in their respective systems. The Examiner proposes a combination that would make some or all of these references inoperable for their intended purposes. Abbott denigrates the use of the type of pump (peristaltic) that Dennehey and Plotkin specifically require for their systems. Plotkin denigrates the use of the type of pump (bladder) that Abbott specifically requires for its system. These divergences among the prior art references teach away from the Examiner's proposed combinations and thereby support the nonobviousness of the present claims. In re Gordon, 221 USPQ 1125, 1127 (Fed. Cir. 1984) (finding no

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suggestion to modify a prior art device where the modification would render the device inoperable for its intended purpose). The Federal Circuit has stated:

[A]s a “useful general rule,” ... references that teach away cannot serve to create a prima facie case of obviousness. ... If references taken in combination would produce a “seemingly inoperative device,” we have held that such references teach away from the combination and thus cannot serve as predicates for a prima facie case of obviousness.

McGinley v. Franklin Sports Inc., 60 USPQ 2d 1001, 1010 (Fed. Cir. 2001);
In re Spinnoble, 160 USPQ 237, 244 (CCPA 1969) (references teach away from combination if combination produces seemingly inoperative device).

Conclusion

Applicants respectfully solicit entry of the proposed claim amendments. With the entry of these amendments, Applicants respectfully submit that the present claims define an invention that is patentable over all of the art of record and that this application is in condition for allowance. Should any minor matters remain prior to the issuance of a notice of allowance, Applicants request the Examiner to telephone the undersigned attorney to reach prompt resolution thereof.

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If any additional fees are due in connection with the filing of this paper, please charge the fees to our Deposit Account No. 16-2312. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such an extension is requested and the fee should also be charged to our deposit account.

Respectfully submitted,

Date: 4/7/04

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